



Date: September 30, 2015
To: Mayor and Members of the City Council
From: Patrick H. West, City Manager *T.H.W.*
Subject: Letter from Southern California Edison

Attached is a copy of a letter we received today from Southern California Edison that responds to the September 1, 2015 letter from the California Public Utilities Commission (attached) regarding the recent power outages that began on July 15, 2015, and directing SCE to undertake various actions and report on the actions taken in writing within 30 days.

Attachments (2)

Cc: Charles Parkin, City Attorney
Laura Doud, City Auditor
Tom Modica, Assistant City Manager
Arturo Sanchez, Deputy City Manager
Jyl Marden, Assistant to the City Manager

September 30, 2015

Elizaveta Malashenko
Director, Safety and Enforcement Division
California Public Utilities Commission
505 Van Ness Ave
San Francisco, California 94102

Regarding: Underground Facilities in Long Beach

Dear Ms. Malashenko:

On behalf of Southern California Edison Company, please accept this letter as acknowledgement and response to your letter dated September 1, 2015 regarding the power outages on SCE's distribution network system in the City of Long Beach.

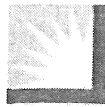
The safety of SCE customers and employees is our first priority. The company is continuing to cooperate with the Commission through its investigation into the outages and has already implemented some changes to the system to improve safety and reliability on the network. SCE shares the same desired outcome with the City and the Commission through this process – to deliver safe and reliable service to Long Beach residents. SCE welcomes the Commission's involvement in this process.

In response to the recent power outages on SCE's underground Secondary Network System in the City of Long Beach, your letter directed SCE to undertake various actions and to report SCE's actions in writing within 30 days. Many of these activities were performed by SCE following the July 15th outage on the Long Beach Network System. The following describes SCE's activities in response to the seven items listed in the above-referenced letter:

1. Following the July 15th outage, SCE performed a thorough and detailed inspection of 329 underground structures, including 303 underground vaults and other types of underground structures that comprise the Long Beach Network System. These adhoc inspections included a thorough and detailed inspection of the underground structures, equipment, underground cable and components, network protectors, and cable limiters. During these inspections, SCE crews were verifying that the Long Beach Network System was configured correctly. Additionally, although no major equipment problems were discovered during the inspections, the crews did identify minor repairs or system upgrades, most of which have already been completed. All remaining items are currently being addressed and will be completed before the end of the year. In addition to these inspections, SCE is continuing to perform ongoing detailed inspections of the overhead and underground facilities in Long Beach pursuant to SCE's Distribution Inspection and Maintenance Program (DIMP), in accordance with GO 165. SCE's detailed inspections include a thorough and detailed inspection of all overhead and underground structures, equipment, underground cable and components, in accordance with SCE standards, which meet or exceed the

requirements of the Commission's General Orders.

2. As explained in the previous response, SCE inspected 329 underground structures following the July 15th outage, including 303 underground structures associated with the Long Beach Network System, which included a detailed inspection of all the lead conductors and splices in those structures. SCE also performs ongoing detailed inspections of underground facilities under the DIMP program, which includes the inspection of lead cable and splices as well as non-lead cable and splices in accordance with SCE standards, which meet or exceed GO 128 requirements. In addition, although not required by GO 165, SCE started inspecting underground structures without equipment in 2010, and has inspected all vault and manhole structures without equipment in the City of Long Beach, which includes the inspection of underground cable and splices in those structures. Going forward, SCE will continue to inspect these structures without equipment on a routine basis.
3. SCE has performed a detailed inspection of the Protective Devices that are part of the Long Beach Network System. This includes network protectors and associated relays, and other related equipment on the Long Beach Network System. This detailed inspection included verification of the proper operation and settings for the protective equipment. Additionally, following the July 15th outage, SCE began performing additional tests on all substation circuit breakers, relays, and transformers feeding the Long Beach Network System. This testing will be completed by year end, and any conditions requiring follow-up corrective action will be prioritized and corrected in accordance with SCE standards.
4. As explained above, SCE inspected 329 underground structures following the July 15th outage, including 303 structures associated with the Long Beach Network System, and SCE is continuing to perform ongoing detailed inspections of underground facilities under the DIMP program. These inspections included the inspection of underground equipment to ensure it was working properly, such as blowers used for ventilation. Following these inspections, notifications were created for any identified corrective actions or upgrades, including blowers needing repair or replacement, and most of these items have already been completed. All remaining items are currently being addressed, and will be completed before the end of the year. In addition, SCE will perform a review of the asset records for approximately 2,100 additional underground structures in the City of Long Beach, which are not part of the Long Beach Network System, to evaluate ventilation system installations. Any conditions requiring follow-up, corrective action will be prioritized and corrected in accordance with SCE standards. SCE will complete this review by the end of the year.
5. Following the July 15th outage, SCE tethered 287 underground structures on the Long Beach Network System. SCE's engineering department is evaluating various alternatives for securing underground vault and manhole lids, and the potential for broader application.



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Greg Ferree
Vice President
Distribution Business Line
Southern California Edison

6. The Long Beach Network System is a dynamic system composed of 62 transformer installations, serving approximately 3,200 customers. Based on currently available loading information from automated Network Protectors, the Long Beach Secondary Network is loaded to approximately 66 percent of its capacity. SCE is working to automate the remaining Network Protectors by the end of the year, and that information will be used to model the total customer peak demand on the system. In addition, SCE is currently developing and testing a pilot project to analyze distribution transformer loading based on SCE's automated metering data for the approximately 14,000 distribution transformers in the City of Long Beach that are served from radial circuits. SCE will use this information to determine if any transformers on the overhead or underground radial distribution system require further review or action, and any conditions requiring follow-up corrective action will be prioritized and corrected in accordance with SCE standards. SCE is planning to complete this evaluation by the end of the year.
7. SCE performs testing of all substation circuit breakers, relays, and transformers on a routine basis to ensure safe and reliable service for all circuits across the SCE system, including the circuits feeding the Long Beach Network System and Port of Long Beach. SCE has three substations supplying power to the Long Beach Network system and seventeen substations supplying power to the Port of Long Beach, or large customers located within the port area. SCE has reviewed all of the inspection and maintenance records for the three substations feeding the Long Beach Network system, and 17 substations feeding the Port of Long Beach, to confirm the continued safe and reliable operation of circuits from these stations. Additionally, following the July 15th outage, SCE began performing additional tests on all circuit breakers, relays, and transformers feeding the Long Beach Network system. This additional out-of-cycle testing will be completed by year end, and any conditions requiring follow-up corrective action will be prioritized and corrected in accordance with SCE standards.

Please let me know if you have any questions regarding the foregoing.

Very truly yours,

Greg Ferree
Vice President
Distribution Business Line
Southern California Edison
3 Innovation Way
Pomona, CA 91768

cc: Charlotte TerKeurst, ESRB, San Francisco
Fadi Daye, ESRB, Los Angeles

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE

SAN FRANCISCO, CA 94102-3298



September 1, 2015

Greg Ferree
Vice President, Distribution
Southern California Edison (SCE)
3 Innovation Way
Pomona, CA 91768

Re: Underground Facilities in Long Beach

Dear Mr. Ferree:


On July 15, 2015, the city of Long Beach experienced numerous power outages and at least one explosion in an underground vault. The city of Long Beach continues to experience power outages and unusual conditions in underground vaults such as "smoking vaults". The Safety and Enforcement Division (SED) of the California Public Utilities Commission is concerned about the safety and reliability of the electric distribution system serving Long Beach, and the measures being taken to keep the public safe. Therefore, SED directs SCE to:

1. Perform a detailed inspection on all the underground facilities that are part of the Secondary Network System in Long Beach to verify compliance with General Order (GO) 128. The detailed inspection shall include a thorough inspection of each network protector and each mole limiter to verify that they are configured correctly and operational.
2. Perform a detailed inspection on all the lead conductors and splices in the city of Long Beach to verify the safe condition of the conductors and splices, and to confirm compliance with GO 128.
3. Perform a detailed inspection on every protective device (such as relays, breakers, fuses, etc.) connected to any of the "primary feeder circuits" that are part of the Secondary Network System to verify proper operation and settings.
4. Confirm the ventilation system is properly working in all underground vaults in Long Beach that require ventilation.
5. Confirm that the cover of each underground vault in Long Beach is properly tethered and secured to ground to minimize potential injuries should an explosion occurs.
6. Confirm that all transformers serving the Long Beach area are properly rated to meet customer demand, particularly during time of peak demand.
7. Inspect and confirm the safe and reliable operation of (a) the circuit supplying power to the Port of Long Beach, and (b) any spot network serving large customers in the city of Long Beach.

The recent rash of outages, smoking vaults, and explosion in Long Beach is very troubling. SED believes that investigating and mitigating these unsafe conditions should be SCE's top priority. Please report SCE's actions to comply with the seven items listed above in writing within 30 days from the date of this letter.

If you have any questions, please contact Fadi Daye at fadi.daye@cpuc.ca.gov or (213) 576-7017.

Sincerely,



Elizaveta Malashenko
Director, Safety and Enforcement Division
California Public Utilities Commission

Cc: Charlotte TerKeurst, Program Manager, ESRB – CPUC
Laura Genao, SCE, 610 Van Ness Ave, Suite 2030, San Francisco, CA 94105